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MEMORANDUM FOR DR. CHARYK

SUBJECT: LANYARD Program Concept


References: a. SAFUS Memo for DDR/CIA, 2 April 1962, Management of LANYARD.

b. CIA Memo for SAFUS, 5 April 1962, Management of LANYARD.

1. Under the general terms of the agreements established in the above references, this document contains my proposal for the joint Air Force/Central Intelligence Agency conduct of the LANYARD Program. In this document, we have endeavored to define the working concepts, responsibilities and organizations for the successful accomplishment of the objective of LANYARD.

2. I submit this LANYARD Program Concept for your review and approval. Following your approval, I recommend that the document be transmitted to the Central Intelligence Agency for their concurrence and our joint implementation.

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ROBERT E. GREER
Major General, USAF
Director of Special Projects

NRO and USAF
review(s) completed.

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LANYARD PROGRAM CONCEPT

I. OBJECTIVE

The objective of the LANYARD Program is to conduct a joint Air Force/Central Intelligence Agency covert, high resolution, stereo, satellite reconnaissance program of thirteen launches, beginning in early 1963, aimed at the coverage of specific high priority targets in denied areas.

II. PROGRAM CONCEPTS

A. General

1. The LANYARD Project will use, whenever possible, hardware and facilities that presently exist in the DISCOVERER Program. Further, the project will utilize the [] camera system developed for (E-5) (101B) Program modified to be compatible with the capabilities of the Thrust Augmented Thor/AGENA-D booster/satellite combination.

2. The overt portion of the LANYARD Program will be accomplished by the establishment of a new Space Systems Division (AFSC) Program,

[] Air Force fund category designates space technology and component development. Employing this funding category, exploiting to the maximum extent the new DOD space information security restrictions (Gilpatric) and overtly placing the program management in the hands of the Director, Special Projects, OSAF; will provide the necessary environment for the LANYARD Program. The overt program, [] will be assigned to the Director, [] (DISCOVERER). This assignment will permit the utilization of the experience, skills and knowledge of the [] organization for the LANYARD Program.

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3. As a joint Department of Air Force and Central Intelligence Agency program, the LANYARD Program will endeavor to employ those features, skills, facilities, and talents of each participating organization in such a fashion as to best utilize the capabilities of each for the achievement of a common goal. The specific responsibilities of each participant are defined in the remarks to follow.

B. Technical Approach

1. The existing E-5 camera system will be modified and lightened to make it compatible with the capabilities of the Thrust Augmented Thor/AGENA-D combination and the existing DISCOVERER re-entry vehicle. A special forward section will be developed to mount the E-5 camera system and the peculiar equipment on the AGENA. The resulting system will provide [REDACTED] at the opera-

tional altitude, stereo capability and [REDACTED]
[REDACTED] with a payload capability of [REDACTED]

2. The thrust of the THOR DM-21 space booster will be augmented by the addition of three XM-33 solid rocket boosters. These solid motors will be supported at the mid-section and base of the THOR on 120 degree centers. Circuitry will be provided for ignition of these boosters only after the main engine is ignited and the booster is committed to launch. The casings will be jettisoned automatically at a position consistent with range safety criteria (after approximately 60 seconds of burning.)

3. In order to increase the probability of covering the desired target(s) the BTL guidance system will be moved from THOR booster

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into the AGENA satellite to provide accurate steering after separation from the booster. In addition, this guidance system will have a flexible program capability which will permit a wide variety of inclination angles.

4. Project LANYARD vehicles will be launched from Vandenberg AFB into near polar orbits. Launch facilities presently used by

[] will be used with only minor modification required to support Thrust Augmented Thor. Normal range safety support will be provided by Pacific Missile Range.

5. A planned flight test of the Thrust Augmented Thor/ACENA-D combination will be conducted in the fall of 1962.

C. Internal Government Arrangements

1. Technical Program Management (SE/TD): Technical responsibilities for the accomplishment of the LANYARD Program rests with the Director, Special Projects, OSAF. In this capacity the Director, Special Projects will discharge all major technical decisions affecting the development, modification and delivery rates of all components of this system. Specific detailed technical responsibilities will be delegated to the Director, [] for the day-to-day operation of the technical aspects of the program. A Configuration Control Board will be constituted from representatives of the participating organizations to support, advise, and counsel the Director, Special Projects and the Director,

[] The CCB will review and assess all proposed changes and modifications to the payload, items affecting the on-orbit operation of the payload, and the content of the final product. The Configuration Control Board actions which do not involve a change in contract scope, alter payload characteristics or performance, do not affect delivery or

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launch schedules, and which have no appreciable effect on costs (\$10,000) will be submitted to the Director, [] for final approval.

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The Configuration Control Board actions involving a change in contractual scope, costs in excess of \$10,000, revisions to launch schedules or payload performance, will be submitted through the Director, [] to the Director, Special Projects for final approval. For CCB procedures, see Annex A.

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2. Security: Program security responsibility is vested in the Central Intelligence Agency. The security system for the IANYARD Program will be established as a separate program. The objective of the security plan will be to provide for the protection of both the "C" Program and the IANYARD Program and prevent the compromise of one as a result of the activities of the other. Contractor personnel clearance procedures for the IANYARD Program will make provision for the final approval of all clearance requests by the Director, Special Projects or his authorized representative. For detailed contractor clearance procedures, see Annex B. Clearance requests sponsored by all DOD activities, outside of the Office of the Under Secretary of the Air Force, must receive the approval of the Director, Special Projects prior to the issuance of the clearance.

3. Procurement:

(a) Overt Procurement: Procurement of the large dollar volume items as the booster, the AGENA-D vehicle, adaptation of the AGENA-D vehicle to a [] configuration, GSE, launch services, and related items will be accomplished by the Air Force using [] cover. Contract administration will be accomplished in accordance with Air Force requirements and standards.

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(b) Covert Procurement: Under the authority vested in the Central Intelligence Agency for covert procurements and employing a Central Intelligence Agency procurement officer in residence with the Director, Special Projects, the Central Intelligence Agency will procure the following general category of materials and services: SE/TD services; payloads and spares; re-entry vehicles and spares; payload integration, assembly and checkout; payload GSE; and test equipment. Contract administration will be accomplished in accordance with Central Intelligence Agency requirements and standards.

(c) Programming and Financial Management: Programming of funds and financial management will be the responsibility of Director, Special Projects for both overt and covert procurements. For covert procurements, the Central Intelligence Agency channels for procurement authority releases and disbursement of payments will be utilized. For covert procurement details, see Annex C.

4. Operations: All operational requirements, priorities, and responses to the national need will be the responsibility of the Central Intelligence Agency. Except for circumstances arising as a result of vehicle or payload technical difficulties wherein the decision of the Director, Special Projects is overriding; control of all vehicle operations following orbit injection will conform to the operational requirements as established by the Central Intelligence Agency. This responsibility is interrupted only during the recovery sequence at which time recovery operations revert to Director, Special Projects. Upon the return of the recovery body to the continental United States, the Central Intelligence Agency then assumes full responsibility of further processing of the recovered take. It can be anticipated that the resources of the STC will

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be required to support this program to a level not yet determined at this time.

5. Communications:

(a) Operational-Administrative Communications Net:

This net will operate between Director, Special Projects, Headquarters, Central Intelligence Agency, the STC, and SAFSS. Present facilities employed in the "C" Program can be used as a basis for the development of the new net. The purpose of this net is to provide for the exchange of operational information during missions and such administrative traffic as is appropriate.

(b) Technical-Administrative Communications Net:

This net will provide direct communications between the Director, Special Projects and all major contractors. The various contractors in the net will be able to communicate with each other by relay through the Director, Special Projects. The purpose of this net will be to provide for rapid and secure handling of technical and administrative matters.

6. Contract Management Structure: The contract management structure for the IANYARD Program will consist essentially of the following basic elements:

(a) A prime weapons systems contractor for Systems Engineering and Technical Direction will be designated. This contractor will be the Lockheed Missile and Space Company (LMSC). Under this arrangement the LMSC will have a dual role, that of being the prime contractor on the overt side for and that of being the SE/TD contractor on a covert basis for the payload. The LMSC covert responsibilities will include payload integration under an SE/TD contract.

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(b) The camera will be procured under a covert contract from the ITEK Corporation which will act in the role of an associate contractor. The residual payload inventory resulting from the termination of the E-5 (101B) Program will be transferred to the LANYARD Program employing the new LANYARD payload covert contract.

(c) The recovery system will be procured under a covert contract from the General Electric Company on a fixed price basis. The General Electric Company will perform as an associate contractor.

(d) The development of the Thrust Augmented Thor booster will be the responsibility of the Douglas Aircraft Company under an overt contract from the Space Systems Division for [REDACTED]

(e) Launch support, on-orbit communications, and support operations will be provided by overt contracts between the Space Systems Division, [REDACTED] and the respective contractors.

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